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CROSS REFERENCE TO

2

RELATED APPLICATIONS

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This application is a regular application of provisional application number 60/260,373,

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filed December 1, 2000, entitled Natural Motion Energy Saver, by Ionel Vinchici, and to be

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incorporated herein by reference thereto.

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BACKGROUND OF THE INVENTION

Field of the Invention:

The present invention relates to a prime mover. More particularly, the present invention relates to a primer mover for powering an electrical generator.

Description of the Prior Art:

Numerous innovations for prime movers have been provided in the prior art. Even though these innovations may be suitable for the specific individual purposes to which they address, however, they differ from the present invention as heretofore described.

SUMMARY OF THE INVENTION

ACCORDINGLY, AN OBJECT of the present invention is to provide a prime mover for powering an electrical generator that avoids the disadvantages of the prior art.

ANOTHER OBJECT of the present invention is to provide a prime mover for powering an electrical generator that is simple to use.

BRIEFLY STATED, STILL ANOTHER OBJECT of the present invention is to provide a prime mover that stores mechanical energy in case of an electrical failure. When an electrical failure occurs, the prime mover is activated either automatically by a computer with a battery back-up or manually. The prime mover oscillates back and forth in a pendulum type fashion, which in turn drives an electrical generator in order to produce electricity. The prime mover comprises a base, elements that are rotatably mounted to the base, a pick-up balance that is rotatably mounted to the base, and a drive train that operatively connects the prime mover to the electrical generator.

The novel features which are considered characteristic of the present invention are set forth in the appended claims. The invention itself, however, both as to its construction and its method of operation, together with additional objects and advantages thereof, will be best

- 1 understood from the following description of the specific embodiments when read and
- 2 understood in connection with the accompanying drawing.

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BRIEF DESCRIPTION OF THE DRAWING

- 1
- 2 **FIGURE 1** is a diagrammatic perspective view of the present invention;
- 3 **FIGURE 2** is a diagrammatic side elevational view taken generally in the direction of
- 4 **ARROW 2** in **FIGURE 1**;
- 5 **FIGURE 3** is a diagrammatic side front view taken generally in the direction of **ARROW**
- 6 **3** in **FIGURE 2**;
- 7 **FIGURE 4** is a diagrammatic top plan view taken generally in the direction of **ARROW 4**
- 8 in **FIGURE 3**; and
- 9 **FIGURE 5** is an exploded diagrammatic perspective of the present invention shown in
- 10 **FIGURES 1-4.**

LIST OF REFERENCE NUMERALS

UTILIZED IN THE DRAWING

- | | | |
|----|-----------|--|
| 1 | | |
| 2 | | |
| 3 | 10 | prime mover of present invention for powering electrical generator 12 |
| 4 | 12 | electrical generator |
| 5 | 14 | base |
| 6 | 16 | elements |
| 7 | 18 | pick-up balance |
| 8 | 20 | drive train for operatively connecting prime mover 10 to electrical generator 12 |
| 9 | 22 | rear end support of base 14 |
| 10 | 24 | throughbore in rear end support 22 of base 14 |
| 11 | 26 | front end support of base 14 |
| 12 | 28 | throughbore in front end support 26 of base 14 |
| 13 | 30 | main axle sleeve of base 14 |
| 14 | 32 | main axle of base 14 |
| 15 | 34 | generator support of base 14 for supporting electrical generator 12 |
| 16 | 36 | reset motor support of base 14 |
| 17 | 38 | plurality of element arms of elements 16 |
| 18 | 40 | first ends of plurality of element arms 38 of elements 16 |

1	42	second ends of plurality of element arms 38 of elements 16
2	44	element clutch of elements 16
3	46	element gear of elements 16
4	48	plurality of element weights of elements 16
5	50	primary balance of elements 16
6	52	counter balance of elements 16
7	54	pivot of elements 16
8	56	pick-up balance gear of elements 16
9	58	generator arm of drive train 20 for connecting to electrical generator 12
10	60	generator arm axle of drive train 20
11	62	following arm of drive train 20
12	64	driving arm of drive train 20
13	66	reset motor of drive train 20
14	68	pulley system of drive train 20
15	70	first pulley of pulley system 68 of drive train 20
16	72	second pulley of pulley system 68 of drive train 20
17	74	third pulley of pulley system 68 of drive train 20 for connecting to electrical generator
18	12	
19	76	cable of pulley system 68 of drive train 20

1 **DETAILED DESCRIPTION OF**
2 **THE PREFERRED EMBODIMENT**

3 Referring now to the drawings, and particularly to **FIGURES 1-5**, the prime mover of
4 the present invention is shown generally at **10** for powering an electrical generator **12**.

5
6 The prime mover **10** stores mechanical energy in case of an electrical failure. When
7 an electrical failure occurs, the prime mover **10** is activated either automatically by a computer
8 with a battery back-up or manually. The prime mover **10** oscillates back and forth in a
9 pendulum type fashion, which in turn drives the electrical generator **12** in order to produce
10 electricity.

11 The prime mover **10** comprises a base **14**, elements **16** that are rotatably mounted to
12 the base **14**, a pick-up balance **18** that is rotatably mounted to the base **14**, and a drive train **20**
13 for operatively connecting the prime mover **10** to the electrical generator **12**.

14 The base **14** comprises a rear end support **22** that has a throughbore **24**, a front end
15 support **26** that has a throughbore **28**, a main axle sleeve **30** that extends through the
16 throughbore **24** in the rear end support **22** and the throughbore **28** in the front end support **26**,

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1 a main axle **32** that extends through the main axle sleeve **30**, a generator support **34** that is
2 spaced behind the front end support **26** and is for supporting the electrical generator **12**, and
3 a reset motor support **36** that is spaced in front of the front end support **26**.

4 The elements **16** comprise a plurality of element arms **38** that have first ends **40** that
5 rotatably receive the main axle sleeve **30** and second ends **42**, an element clutch **44** that
6 operatively connects the plurality of element arms **38** to the main axle sleeve **30**, an element
7 gear **46** that is attached to the main axle sleeve **30**, a plurality of element weights **48** that are
8 connected to the second ends **42** of the plurality of element arms **38**, a primary balance **50**,
9 and a counter balance **52**.

10 The amount of the electricity produced is proportional to the amount of the plurality
11 of weights **48** used in the plurality of element arms **38** and the pick-up balance **18**. For
12 example, a small office may require the plurality of weights **48** to be one ton each (the plurality
13 of element arms **38** to be twelve elements) and the pick-up balance **18** to be 12 tons.

14 The pick-up balance **18** rotatably receives the main sleeve **30**, is operatively connected
15 to the plurality of element arms **38**, via a pivot **54**, and has a pick-up balance gear **56** that is
16 operatively connected thereto.

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1 The drive train **20** comprises a generator arm **58** that is disposed in front of the front
2 end support **26** and is for connecting to the electrical generator **12**, a generator arm axle **60** that
3 is operatively connected to the generator arm **58**, a following arm **62** that is operatively
4 connected to the generator arm **58** by the generator arm axle **60** so as to form a crank
5 therewith, and a driving arm **64** that is operatively connected to the following arm **58** and
6 receives the main axle sleeve **30**.

7 The drive train **20** further comprises a reset motor **66** that extends between the front
8 end support **26** and the reset motor support **36**, is operatively connected to the main axle **30**,
9 and is controlled by a computer to reset the prime mover **10** once electric power has been
10 restored.

11 The drive train **20** further comprises a pulley system **68** that comprises a first pulley
12 **70** that is attached to the reset motor **66**, a second pulley **72** that is attached to the main axle
13 **30**, and a third pulley **74** that is for connecting to the electrical generator **12**, and a cable **76**
14 that operatively connects the first pulley **70**, the second pulley **72**, and the third pulley **74**
15 together.

16 At a staling position, the plurality of element arms **38** rotate one at a time
17 counterclockwise until they rest on the pick-up balance **18**. Once all of the plurality of element

1 arms **38** rest on the pick-up balance **18** so as to form an entire balance (*i.e.* the plurality of
2 element arms **38** and the pick-up balance **18**), the entire balance rotates counter clockwise and
3 causes the cable **76** to rotate each of the plurality of element arms **38** in turn clockwise back
4 to the starting position so as to form oscillating rotations that form a progression . The
5 progression is repeated until the plurality of element arms **38** and the pick-up balance **18** find
6 equilibrium due to losses. The oscillating rotations drive the crank which is operatively
7 connected to the electrical generator **12** which produces the electricity.

8 It will be understood that each of the elements described above, or two or more
9 together, may also find a useful application in other types of constructions differing from the
10 types described above.

11 While the invention has been illustrated and described as embodied in a prime mover
12 for powering an electrical generator, however, it is not limited to the details shown, since it will
13 be understood that various omissions, modifications, substitutions and changes in the forms
14 and details of the device illustrated and its operation can be made by those skilled in the art
15 without departing in any way from the spirit of the present invention.

16 Without further analysis, the foregoing will so fully reveal the gist of the present
17 invention that others can, by applying current knowledge, readily adapt it for various

- 1 applications without omitting features that, from the standpoint of prior art, fairly constitute
- 2 characteristics of the generic or specific aspects of this invention.

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